

## **5.16 Waste Management**

This section discusses potential impacts from the generation, storage and disposal of hazardous and non-hazardous wastes from the Amended Project. The discussion includes descriptions of waste streams generated during construction and operation, potential impacts on waste disposal sites expected to be used for Project wastes, and measures to minimize impacts. The transmission lines that will interconnect the Project with the regional grid are already licensed and the Amended Project does not propose any changes to them. Thus, the transmission lines are not part of the Amendment Petition and are not discussed in this section. Appendix I of this Amendment Petition contains the updated Phase I Environmental Site Assessment (ESA) that was prepared for the Amended Project.

### **5.16.1 Summary of Differences between Amended Project and Original SSU6**

There are insignificant changes in the affected environment related to waste management between the Amended Project and the original SSU6 project. The additional Phase I ESA work performed in 2008 indicates minimal differences in terms of existing conditions between the original plant site and the current site. The new injection well pad locations and the injection pipeline routes do not show evidence of existing waste management-related issues.

Similar to the original SSU6 project, the Amended Project would result in no significant waste management impacts. With a number of exceptions, waste generation will be very similar. However, the Amended Project incorporates two major changes that significantly reduce the generation of wastes compared to the original project, and thus, make Amended Project impacts even lower than the original project. These are: 1) the use of single flash geothermal technology and 2) a different air emission abatement system. The use of single flash technology avoids producing approximately 142 tons per day of filter cake that would have been generated by the original SSU6 project's multi-flash technology. The air emission abatement system proposed for the original project would have produced approximately three tons per day of elemental sulfur potentially contaminated with heavy metals such as mercury, possibly making this waste stream a hazardous waste. In addition, about four pounds per hour of benzene-saturated water would have been generated. In contrast, the abatement system proposed for the Amended Project will generate an aqueous solution of sulfide and sulfate salts that will be disposed via injection and no sulfur or benzene waste streams will occur.

### **5.16.2 LORS Compliance**

Table 5.16-1 and the following text summarize the applicable LORS that govern the management of non-hazardous and hazardous wastes. The Amended Project will comply with the applicable waste management LORS during both construction and operation.

**Table 5.16-1 LORS Applicable to Waste Management**

<b>LORS</b>	<b>Applicability</b>	<b>Where Discussed in AP</b>
<b>Federal:</b>		
Solid Wastes: Title 40, Code of Federal Regulations (CFR), Subchapter I	Establishes the criteria for characterizing hazardous waste, hazardous waste generator requirements, and management of oil and universal waste.	Section 5.16.2
Hazardous Materials: Title 49, CFR, Subchapter C	Establishes standards for the transportation of hazardous materials including hazardous waste.	Sections 5.16.2 and 5.16.4
Resource Conservation and Recovery Act (RCRA) of 1976 which amended and revised the Solid Waste Disposal Act of 1965. RCRA subsequently amended in 1978, 1980 and 1984: Title 42, United States Code (USC), §§ 6901, <i>et seq.</i>	Provides the basic framework for Federal regulation of non-hazardous and hazardous waste.	Sections 5.16.2 and 5.16.4
Comprehensive Environmental Response, Compensation and Liability Act (Superfund): Title 42, USC, §§ 9601, <i>et seq.</i>	Establishes mechanisms for the cleanup of accidental spills or releases of pollutants into the environment.	Section 5.16.2
<b>State:</b>		
Hazardous Waste Control Act of 1972, as amended: Title 22, California Health and Safety Code (HSC), Division 20, Chapter 6.5	Establishes the framework for managing hazardous waste in California.	Sections 5.16.2 and 5.16.4
Environmental Health Standards for the Management of Hazardous Waste: Title 22, California Code of Regulations (CCR), Division 4.5 Implementing Chapter 6.5).	Establishes the requirements for disposal and management of hazardous waste in California.	Sections 5.16.2 and 5.16.4
Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program): HSC, Chapter 6.11, §§ 25404 – 25404.9.	Establishes the framework for six environmental and emergency response programs and includes the mechanism for implementing the Certified Unified Program Agency (CUPA) program.	Sections 5.16.2 and 5.16.4
Unified Hazardous Waste and Hazardous Materials Management Regulatory Program: Title 27, CCR, Division 1, Subdivision 4, Chapter 1, §§ 15100, <i>et seq.</i>	Establishes specific CUPA reporting requirements for businesses.	Sections 5.16.2 and 5.16.4
Hazardous Waste Source Reduction and Management Review Act of 1989, Senate Bill (SB) 14: HSC, Division 20, Chapter 6.5, Article 11.9, §§ 25244.12, <i>et seq.</i>	Establishes the regulatory basis for the State's hazardous waste source reduction activities.	Sections 5.16.2 and 5.16.4

**Table 5.16-1 LORS Applicable to Waste Management**

<b>LORS</b>	<b>Applicability</b>	<b>Where Discussed in AP</b>
Hazardous Waste Source Reduction and Management Review: Title 22, CCR, §§ 67100.1 <i>et seq.</i>	Further clarification of the State's hazardous waste source reduction activities.	Sections 5.16.2 and 5.16.4
California Integrated Waste Management Act of 1989; Public Resource Code (PRC) Division 30, §§ 40000, <i>et seq.</i>	Establishes mandates and standards for management of solid waste.	Sections 5.16.2 and 5.16.4
California Integrated Waste Management Board; Title 14, CCR, Division 7	Establishes minimum standards for solid waste handling and disposal.	Section 5.16.2
Local:		
Imperial County Health and Safety Ordinance: Title 8, Chapter 72, § 872010	Establishes the Department of Public Works as the agency responsible for implementation and administration of the County Solid Waste Management Program.	Section 5.16.2
Imperial County Health and Safety Ordinance: Title 8, Chapter 72, § 8872050	Establishes a permit requirement for any person, firm or corporation utilizing a county solid waste disposal facility unless otherwise exempted.	Section 5.16.2
Imperial County Health and Safety Ordinance: Title 8, Chapter 72, § 872110	Establishes the County Health Department Division of Environmental Quality Control as the local enforcement agency (LEA) in accordance with PRC Section 43202 <i>et seq.</i> , and establishes responsibility for, among other things, issuance and administration of permits for solid waste facilities.	Section 5.16.2

### 5.16.2.1 Federal LORS

Federal waste management LORS are described below.

**Subtitles C (RCRA) and D (Solid Waste), Solid Waste Act, as amended, 42 USC Sec. 6901 *et seq.* Solid Wastes, Title 40 CFR, Subchapter I**

These regulations were established by the U.S. Environmental Protection Agency (EPA) to implement the provisions of the Solid Waste Disposal Act and RCRA (described below). Among other things, the regulations establish the criteria for classification of solid waste disposal facilities (landfills), hazardous waste characteristic criteria and regulatory thresholds, hazardous waste generator requirements, and requirements for management of used oil and universal wastes.

The EPA implements the regulations at the Federal level. However, California is an authorized state, so California's Integrated Waste Management Board implements the regulations in lieu of the EPA.

**The Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 et seq.**

The Solid Waste Disposal Act, as amended and revised by the RCRA, establishes requirements for the management of solid wastes (including hazardous wastes), landfills, underground storage tanks (USTs), and certain medical wastes. The statute also addresses program administration, implementation and delegation to states, enforcement provisions and responsibilities, as well as research, training, and grant funding provisions. Provisions are established for the generation, storage, treatment, and disposal of hazardous waste, including requirements addressing generator record keeping, labeling, shipping papers, placarding, emergency response information, training, and security plans.

**Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Title 42, U.S.C., §§ 9601, et seq.**

CERCLA (also known as Superfund), establishes authority and funding mechanisms for cleanup of uncontrolled or abandoned hazardous waste sites, as well as cleanup of accidents, spills, or emergency releases of pollutants and contaminants into the environment.

As discussed in Section 5.16.2, the Applicant has conducted a number of Phase I site assessments of the Project site to determine if the Project site has contamination that would trigger site cleanup under CERCLA. Based on these site assessments, it does not appear that site cleanup will be required. However, if stained or odoriferous soil is encountered during grading and construction, the soil would be segregated and analyzed to determine if a cleanup is necessary. Workers will be trained to identify potentially contaminated soil and on proper procedures for handling such soil.

**5.16.2.2 State LORS Applicable**

Applicable State of California LORS are described below.

**California Hazardous Waste Control Act of 1972, Title 22, California HSC, Division 20, Chapter 6.5**

This California law creates the framework under which hazardous wastes must be managed in California. The law provides for the development of a State hazardous waste program that administers and implements the provisions of the Federal RCRA program. It also provides for the designation of California-only hazardous wastes and development of standards that are equal to or, in some cases, more stringent than Federal requirements. CalEPA's Department of Toxic Substances Control (DTSC) administers and implements the provisions of the law at the state level pursuant to authorization from the U.S. EPA. California has delegated certain hazardous waste control functions (primarily related to inspections of hazardous waste generators, to Certified Unified Program Agencies (CUPA) approved by DTSC. A CUPA is typically a local agency that implements some elements of the RCRA program at the local level, as well as some fire department hazardous materials functions and Underground Storage Tank (UST) regulation. As no local agency is designated as the CUPA in Imperial County, the DTSC's office in Calexico is the CUPA for Imperial County and this Project. In addition, DTSC has designated a subset of hazardous wastes called "universal wastes" that are subject to somewhat reduced regulatory requirements.

**California HSC Section 25143.1 as Amended by Senate Bill (SB) 1294**

SB 1294 was signed into law in September 2006 on an urgency basis to take effect immediately. The law was designed to consolidate and reduce governmental oversight of geothermal developments. SB 1294 amended Section 25143.1 of the HSC. Section 252143.1 governs both drilling muds and brine from geothermal energy facilities. As discussed in Section 5.16.4.2, drilling muds, spent brine, and brine solids may accumulate in the Project brine ponds or mud sumps (drilling wastes only). Pursuant to §25143.1, drilling wastes from the Amended Project are exempt from hazardous waste regulation and will be managed as non-hazardous waste. Also pursuant to §25143.1, when brine pond contents are piped directly from the pond to reinjection points, they are exempt from hazardous waste regulation, which for the Amended Project would apply to spent brine. If the brine pond contents are physically removed from the ponds, as would be the case for the brine solids, they may not be reinjected if they are hazardous, and must be disposed to a Class I hazardous waste management facility. If the brine solids are not hazardous, they may be be disposed of at a Class II facility, (e.g., Desert Valley Co. Monofill Facility).

**Environmental Health Standards for the Management of Hazardous Waste, Title 22, CCR, Division 4.5**

These regulations implement the provisions of the California Hazardous Waste Control Act and Federal RCRA. Waste generators must determine if their wastes are hazardous according to specified characteristics or lists of wastes. Hazardous waste generators must obtain identification numbers, prepare manifests before transporting the waste offsite, and use only permitted treatment, storage, and disposal facilities. Generator standards include requirements for record keeping, reporting, packaging, and labeling. Additionally, California requires that hazardous waste be transported by registered hazardous waste transporters.

The standards addressed by Title 22, CCR include:

- Identification and Listing of Hazardous Waste (Chapter 11, §§ 66261.1, et seq.);
- Standards Applicable to Generators of Hazardous Waste (Chapter 12, §§ 66262.10, et seq.);
- Standards Applicable to Transporters of Hazardous Waste (Chapter 13, §§ 66263.10, et seq.);
- Standards for Universal Waste Management (Chapter 23, §§ 66273.1, et seq.);
- Standards for the Management of Used Oil (Chapter 29, §§ 66279.1, et seq.); and
- Requirements for Units and Facilities Deemed to Have a Permit by Rule (Chapter 45, §§ 67450.1, et seq.).

The Title 22 regulations are established and enforced by DTSC. Some generator standards are also enforced at the local level by the applicable CUPA. The CUPA for Imperial County is the Imperial County DTSC office.

**Statutory Exemptions, Health and Safety Code Section 25143.1(c)(1)**

This section of the HSC states that geothermal drilling wastes that are generated from exploration, development, or production of geothermal energy (except filter cake) are statutorily exempt from hazardous waste regulation.

**Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), HSC, Chapter 6.11, §§25404 – 25404.9**

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the six environmental and emergency response programs listed below:

- Aboveground Storage Tank Program,
- Business Plan Program,
- California Accidental Release Prevention (CalARP) Program,
- Hazardous Material Management Plan/Hazardous Material Inventory Statement Program,
- Hazardous Waste Generator/Tiered Permitting Program, and
- Underground Storage Tank Program.

The State agencies responsible for these programs set the standards for their programs while local agencies implement the standards. The DTSC office in the City of Calexico is the CUPA for Imperial County and has jurisdiction over the Project.

The Waste Management analysis provided in this section only considers application of the Hazardous Waste Generator/Tiered Permitting element of the Unified Program. Other elements of the Unified Program are addressed in Section 5.6, Hazardous Materials Handling, and Section 5.18, Worker Safety.

This regulation does not contain requirements specifically for hazardous waste generators; rather, it consolidates existing programs under the jurisdiction of the CUPA. Compliance with the underlying regulations ensures compliance with the requirements of these regulations.

**Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, Title 27, CCR, Division 1, Subdivision 4, Chapter 1, §15100, et seq.:**

While these regulations primarily address certification and implementation of the program by the local CUPAs, the regulations do contain specific reporting requirements for businesses.

- Article 9 – Unified Program Standardized Forms and Formats (§§ 15400-15410).
- Article 10 – Business Reporting to CUPAs (§§ 15600-15620).

This regulation does not contain requirements specifically for hazardous waste generators; rather, it consolidates existing programs under the jurisdiction of the CUPA. Compliance with the underlying regulations ensures compliance with the requirements of this regulation.

**California Integrated Waste Management Act of 1989, PRC, Division 30, §§ 40000, et seq. CCR, Division 7**

The California Integrated Waste Management Act of 1989 (as amended) establishes mandates and standards for management of solid waste. (Although under Federal law, hazardous wastes are a subset of solid wastes, under California law, the two terms are mutually exclusive.) This law regulates non-hazardous

solid waste and provides a solid waste management system to reduce, recycle, and reuse solid waste generated in the State to the maximum extent feasible in an efficient and cost-effective manner to conserve natural resources, to protect the environment, and to improve landfill safety. Among other things, the law includes provisions addressing solid waste source reduction and recycling, standards for design and construction of municipal landfills, and programs for county waste management plans and local implementation of solid waste requirements.

The California Integrated Waste Management Board (CIWMB) develops the regulations and programs that further implement the provisions of the California Integrated Waste Management Act and set forth minimum standards for solid waste handling and disposal. The regulations developed by the CIWMB include standards for solid waste management, as well as enforcement and program administration provisions.

- Chapter 3 – Minimum Standards for Solid Waste Handling and Disposal
- Chapter 7 – Special Waste Standards
- Chapter 8 – Used Oil Recycling Program
- Chapter 8.2 – Electronic Waste Recovery and Recycling

State law requires every local jurisdiction to designate a solid waste Local Enforcement Agency (LEA), which is certified by the CIWMB to enforce Federal and state laws and regulations for safe and proper handling of solid waste. The County of Imperial Health Department Division of Environmental Quality Control is the LEA designated by the CIWMB.

**Hazardous Waste Source Reduction and Management Review Act of 1989 (also known as SB 14), HSC, Division 20, Chapter 6.5, Article 11.9, §25244.12, et seq.**

This law was enacted to expand the State's hazardous waste source reduction activities. Among other things, it establishes hazardous waste source reduction review, planning, and reporting requirements for businesses that routinely generate more than 12,000 kilograms (approximately 26,400 pounds) of hazardous waste in a designated reporting year. The review and planning elements are required to be done on a four-year cycle, with a summary progress report due to DTSC every fourth year. The Amended Project is not expected to generate hazardous wastes in excess of the SB 14 threshold and thus would not be subject to these requirements.

**Hazardous Waste Source Reduction and Management Review, Title 22, CCR, § 67100.1, et seq.**

These regulations further clarify and implement the provisions of the Hazardous Waste Source Reduction and Management Review Act of 1989 (noted above). The regulations establish the specific review elements and reporting requirements to be completed by generators subject to the Act. The Amended Project is not expected to generate hazardous wastes in excess of the SB 14 threshold, thus it would not be subject to these requirements.

**5.16.2.3 Local LORS****Imperial County Land Use Ordinance, Title 9, Division 17, Chapter 1 Section 91701.01**

This ordinance requires that the facilities of a geothermal project be maintained and operated to minimize the possibility of fire, explosion, or any unplanned release of hazardous materials. It also requires that all activities involving use of flammable, explosive, highly corrosive, or reactive materials are provided with adequate safety devices and fire suppression equipment. Additionally, wastes must be disposed of in compliance with local, state, and Federal regulations. The administering agencies for the above ordinance are the Imperial County Department of Public Health, Environmental Health Services Division and the Imperial County Fire Protection Department. The County Department of Public Health, Environmental Health Services Division is the administering agency for Hazardous Materials Business Plans (HMBPs), routine hazardous materials inspections, and the CalARP Program. In addition, the ordinance requires that the discharge of wastes to surface waters must meet the requirements of the Colorado River Basin Regional Water Quality Control Board (RWQCB). Proper disposal of waste is addressed in this section. Proper management of hazardous materials is addressed in Section 5.6, Hazardous Materials. Proper discharge of wastewater is addressed in Section 5.17, Water Resources.

**Imperial County Health and Safety Ordinance, Title 8, Division Chapter 17 Solid Waste Management Sections 872010 to 872110**

The PRC requires every local jurisdiction to designate a solid waste LEA which is certified by the CIWMB to enforce Federal and state laws and regulations for safe and proper handling of solid waste. The County of Imperial Health Department, Division of Environmental Quality Control is the LEA designated by the CIWMB.

Responsibilities of the LEA include accepting and processing all new and revised solid waste facility permits, issuing permits, and conducting regular inspections of permitted facilities. The CIWMB must concur with the solid waste facility permit before it can be issued by the LEA. Any development plan proposing to handle, process, transport, store, or dispose of solid wastes including construction debris, industrial wastes and other discarded wastes must contact the LEA for determination of the need for a solid waste facility permit.

Any person, firm, or corporation utilizing a county-owned solid waste disposal facility in Imperial County must possess a current permit issued by the director, unless such permit is expressly exempted by the regulations proposed by the director and approved by the board of supervisors. The director shall propose and the board of supervisors shall adopt classification of users who shall be exempt from permit requirements.

**5.16.2.4 Involved Agencies and Local Contacts**

Agencies with jurisdiction to issue applicable permits or enforce LORS related to waste management are identified in Table 5.16-2.

**Table 5.16-2 Agencies and Agency Contacts**

<b>Agency Contact</b>	<b>Phone/E-mail</b>	<b>Permit/Issue</b>
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**Table 5.16-2 Agencies and Agency Contacts**

<b>Agency Contact</b>	<b>Phone/E-mail</b>	<b>Permit/Issue</b>
Jeff Lamoure Imperial County Public Health Dept. Environmental Health Services 797 Main Street, Suite B El Centro, CA 92243	(760) 336-8530 larsseifert@co.imperial.ca.us	Solid waste disposal permitting and compliance HMBP
Rosa Hernandez, Deputy Chief Office of Emergency Services 1078 Dogwood Road Heber, CA 92249	(760) 482-2400 (non-emergency) (800) 852-7550 (emergency) rosahernandez@imperialcounty.net	Hazardous substance release notification
Roger Vintze DTSC 304 Heber Avenue Calexico, CA 92231	(760) 768-7104 rvintze@dtsc.ca.gov	Hazardous Waste Generator/Tiered Permitting element of the Unified Program

### 5.16.2.5 Required Permits and Permit Schedule

Required waste management-related permits are identified in Table 5.16-3

**Table 5.16-3 Permits Required and Permit Schedule**

<b>Permit/Approval</b>	<b>Schedule</b>
EPA Generator ID No. and register as a Hazardous Waste Generator with DTSC	Takes 7-10 businesses days once the application form has been received.
Hazardous Waste Generator Permit from Imperial County Department of Health Services, Environmental Health Services	Takes approximately 30 days for approval once needed information submittal (e.g., Business Plan) is complete.

### 5.16.3 Affected Environment

As part of the CEC licensing process for the original project, a Phase I ESA was performed in accordance with the extant American Society for Testing and Materials (ASTM) Standard Practice for ESA: Phase I Site Assessment Process E-1527-00 (URS, 2001). Based on the site reconnaissance, interviews, historical review, and agency records review, no known USTs were identified on the plant site. The Phase I ESA identified the following as Recognized Environmental Conditions (REC) on the property.

- Potential impacts because of the unknown use of concrete slabs, and an empty plastic, aboveground storage tank, indicating the possible presence of a former chemical storage area, in the northeast portion of the subject property.
- Potential releases of hazardous materials (e.g., drilling fluids, fuel, oil, etc.) to the ground from several exploratory and abandoned geothermal wells, and installation and maintenance of three existing onsite geothermal wells in the southwest and southeast portions of the subject property.

- Possible impacts to shallow soil from the burned area observed in the southwest portion of the subject property.
- Potential pesticide and herbicide contamination of surface and subsurface soil because of past agricultural practices on the property may have included the use of currently regulated and banned substances, such as organochlorine pesticides and chlorinated herbicides.

Because of the age of the Phase I ESA (2001) and because of alterations to the Project footprint as described above, an updated Phase I ESA was performed for the Amended Project (see Appendix I). This updated Phase I ESA was performed in accordance with the current ASTM guidance for Phase I ESAs.

Additional Phase 1 site assessments were conducted in October, November and December 2008 to include areas not previously evaluated, including the borrow site. The additional Phase 1 work included additional database research as well as site visits. The Phase 1 resulted in a non-disclosure; no additional conditions at the Amended Project site that would be considered RECS. The previously identified RECs are considered extremely minor if they should be considered RECs at all. As discussed below, they more likely should be considered *de minimis* conditions that do not pose a risk to public health or the environment and would not be subject to agency enforcement actions. No RECs were identified on the additional acreage previously not part of the Project footprint (new injection well pad and pipeline locations; and new borrow site).

By definition under ASTM designation E-1527-00, the term “Recognized Environmental Condition” means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Additionally, the identified RECs do not include any known hazardous substance releases; only potential releases or possible impacts based onsite usage were identified in the Phase I ESAs.

Topsoil will be excavated from the Amended Project plant site during grading and construction. This topsoil will be stockpiled for use as backfill at the borrow sites when the Project earthwork is complete (i.e., when construction of the perimeter berm and the structural fill has been compacted and graded). Although the topsoil may contain potentially elevated concentrations of pesticides and herbicides, these contaminants in surface and subsurface soil are typical of the surrounding area, which is predominantly used for agricultural purposes. Groundwater nearby is of poor quality because of high total dissolved solids concentrations. Therefore, topsoil reclaimed in this manner would not introduce adverse environmental impacts that do not already exist at the borrow site.

### 5.16.4 Environmental Impacts

Impacts of Project waste generation during both construction and operation phases were considered. Impact significance criteria are based on the California Environmental Quality Act Guidelines, Appendix G, and on performance standards or thresholds adopted by responsible agencies. An impact may be considered significant if any of the following apply:

- Construction activities result in waste materials being introduced into the environment in violation of Federal, State, or local waste management and disposal regulations.
- Construction activities generate waste materials that exceed the receiving capacity of appropriate disposal facilities.
- Operation of the facility results in waste materials being introduced into the environment in violation of federal, state, or local waste management and disposal regulations.
- Operational activities generate waste materials that exceed the receiving capacity of appropriate disposal facilities.

The following priorities have been established for waste management during the construction and operation phases for the facility:

- Source reduction (preferred option);
- Recycling;
- Treatment; and
- Disposal (least desirable option).

Disposal would be used only for wastes that cannot be eliminated through source reduction or addressed by recycling. The wastes anticipated from Project construction and operation do not lend themselves to onsite treatment and the Applicant does not intend to operate a hazardous waste treatment operation as part of the Amended Project. Therefore, treatment has been eliminated as a viable waste management option for the Amended Project. Hazardous waste generation will be reduced pursuant to Health and Safety Code §25214.12. Solid waste generation will be reduced in accordance with the California Integrated Waste Management Act § 67100.

#### **5.16.4.1 Construction Wastes and Management Practices**

During construction of the Amended Project, the primary waste generated would be solid non-hazardous waste. Small quantities of non-hazardous liquid wastes, hazardous solid and liquid wastes and universal wastes may also be generated during construction. A description of the waste generating activity, the waste, the anticipated waste quantity, and a description of the waste management practices is provided in this section. The information is summarized in Table 5.16-4.

##### **Hazardous and Universal Wastes**

Hazardous and universal wastes will be stored in a hazardous waste accumulation area. Hazardous waste areas will be constructed with secondary containment with a capacity to hold the 10 percent of the total volume of wastes anticipated in storage plus an allowance for precipitation. Hazardous waste accumulation area regulations will be implemented, such as weekly inspections.

Hazardous and universal wastes will be transported by a licensed transporter using a Uniform Hazardous Waste Manifest and disposed or recycled at an appropriately-permitted facility. Copies of manifests, reports, waste analysis, exception reports, land disposal restrictions, and other related documents will be maintained on site, as required. The Amended Project waste management programs will be integrated into

the waste management programs of the nine other geothermal power plants operated by the Applicant in the Project vicinity.

### *Used Oil*

Per California Health and Safety Code Section 25250.4, used oil must be managed as a hazardous waste. Used oil and hydraulic fluids may be generated during construction when the construction equipment is serviced. The used oil will be accumulated in 55-gallon drums and maintained on site in secure hazardous waste accumulation areas within secondary containment. Used oil will be transported by a licensed hazardous waste transporter and recycled at a licensed recycling facility. Management of used oil will be the responsibility of the construction contractor.

### *Oil Absorbents*

Oily rags and oil absorbent (used to cleanup small spills) may be generated as a normal part of construction equipment maintenance activities. The waste oil absorbents will be accumulated in 55-gallon drums and maintained on site in secure hazardous waste accumulation areas within secondary containment. This waste will be transported by a licensed hazardous waste transporter and shipped offsite for energy recovery or disposal in a Class I landfill. Management of waste oil absorbents will be the responsibility of the construction contractor.

### *Contaminated Soil*

During the course of operating or maintaining construction equipment, there is a small possibility that fuel, lube oil or hydraulic oil accidentally may leak into the soil on the Project site despite reasonable precautions. Contaminated soil would be cleaned up immediately, accumulated in 55-gallon drums, and maintained on site in secure hazardous waste accumulation areas within secondary containment. Quantities cannot be estimated. This waste will be transported by a licensed transporter and shipped off site for energy recovery or disposal in a Class I landfill. Management of contaminated soil will be the responsibility of the construction contractor.

### *Cleaning Solutions and Solvents*

Waste cleaning solutions, such as solvents and other chemical cleaning solutions may be generated during routine construction equipment maintenance and repair. These waste cleaning solutions will be collected and recycled on a regular basis by a licensed contractor (e.g., Safety Kleen or equivalent).

### *Empty Containers*

Empty containers may be generated during construction activities. Typically, empty 55-gallon drums will be returned to the chemical supplier. If not, 55-gallon drums would be sent to a licensed drum recycler. If damaged, 55-gallon steel drums would be recycled as scrap metal. Empty containers that are less than 55-gallon capacity will be disposed of as industrial waste to a Class II or Class III landfill.

### *Used Batteries*

Lead-acid batteries will be recycled through a licensed battery recycler, or exchanged (and recycled) through the vendor when a replacement battery is installed in the equipment. At no time will more than 10

used lead-acid batteries be stored on site. Other used batteries (e.g., alkaline flashlight batteries, lithium ion cell phone batteries) will be accumulated on site in labeled containers and recycled at least annually per California universal waste management requirements.

### **Non-Hazardous Wastes**

Non-hazardous wastes generated during the construction phase of the Amended Project would include scrap wood, concrete, empty containers (plastic, metal, glass, cardboard, and Styrofoam), packaging materials, scrap metals, insulation (silicate and mineral wool), and drilling wastes. Anticipated waste streams and their estimated quantities are described below and summarized in Table 5.16-4.

Non-hazardous wastes will be transported by a licensed transporter and disposed or recycled at an appropriately-permitted facility. Copies of shipping papers, reports, waste analysis, and other related documents will be maintained on site.

#### *Drilling Wastes*

The construction of the production, injection and plant wells associated with the Amended Project will result in several waste streams. These wastes are anticipated to be the same in both quantity and character as those identified for the original SSU6 project. They are expected to include:

- Spent drilling fluids and drilling cuttings (exempt from hazardous waste regulation pursuant to HSC Section 25143.1);
- Well construction wastes (i.e. solid waste); and
- Fluids from performing “back-flowing” completed wells (also exempt from hazardous waste regulation under HSC Section 25143.1).

As mentioned above, there will be three types of wells constructed to support the Amended Project. Production wells will supply geothermal brine from which steam will be flashed to drive the plant turbines. Injection wells will be used to inject the brine subsequent to taking the initial flash of steam. Plant wells will be used to primarily manage aerated brine and cooling tower blowdown from the plant operations. However, during the construction of the wellfield, the plant injection wells will also be used to reinject fluids separated from the drilling wastes as described below. Therefore, from a construction sequence standpoint, one or more of these plant wells will be constructed first. Expected average volumes of drilling fluids and cuttings from each well type, as well as solid waste, from each well type is presented in Table 5.16-4.

Solid waste from well construction will be managed in roll-off containers. These containers will be removed from the jobsite by a permitted hauler and conveyed to a permitted facility for ultimate disposal.

Spent drilling fluids, cuttings, and other materials generated during the drilling program will initially be managed in mud sumps. The Applicant intends to construct a dedicated mud sump for each production and injection well pad location for a total of six mud sumps. In addition to the six mud sumps, the three brine ponds slated for construction on the plant site initially will be employed to manage drilling wastes. These structures will be used interchangeably for gravity separation and air drying materials, to manage solids, fluids, and to briefly store fluids prior to re-injection. The mud sumps are temporary containment ponds that will be decommissioned and removed subsequent to completion of the well construction activities. These

are lined impoundments employing geosynthetic/compacted clay lining systems to hydraulically isolate them from the underlying groundwater table. When the mud sumps are decommissioned their materials of construction are disposed of in the Applicant's monofill disposal facility. The mud sump can vary in capacity depending on the number of wells it is associated with. Each sump is expected to be 726 feet long by 11 feet wide by five feet deep. Each sump will allow for a minimum two feet of freeboard to accommodate a 25-year, 24-hour storm. The Applicant routinely constructs, uses, and decommissions these structures as a part of ongoing operations. CEOE is, therefore, thoroughly familiar with the required construction, operating, monitoring, and management practices.

Drilling wastes will be pumped to these structures (i.e., mud sumps and brine ponds) where the liquid constituents will be allowed to separate by gravity and/or evaporate. Gravity-separated fluids may be pumped or conveyed by truck between sumps/ponds as management demands dictate. Fluids will ultimately be injected into the geothermal formation using the above mentioned plant wells, thus preserving the geothermal resource. Solids, once free of liquids, will be tested in accordance with the requirements in place at the time the Projected is executed and subsequently disposed of in the Applicant's affiliate-operated monofill or a Class I landfill, as appropriate. The mud sumps and brine ponds will be permitted by the RWQCB; see Section 5.17, Water Resources for additional information.

After a well is completed, it must be "back flowed". The well is flushed to remove drilling mud remnants, cuttings, and other materials that might ultimately inhibit the well's performance. Depending on the well, a certain amount of geothermal brine may also be entrained in the back flow stream. The amount of material generated from this activity varies; however, in practice the well is flowed until such time as the fluids are "clear". Generally, this activity takes no more than 24 hours and a flow rate of 96,000 gallons per hour. The Applicant proposes to manage this material in the same manner as the drilling waste discussed above.

Wet drilling wastes consist of soils, brine effluent, and other materials removed from the ground during the construction of production and injection wells. This waste would be allowed to dry out in RWQCB-permitted, clay-lined mud sumps and in the brine ponds. The brine ponds also will be used initially as mud sumps to manage drilling wastes and fluids during well construction. After evaporation, the remaining solid waste will be sent to Desert Valley Company's Monofill Facility, a Class II landfill. The monofill facility is owned by an affiliate of the Applicant. If 20,000 cubic yards of solid waste from drilling operations (a conservative estimate) were collected in mud sumps, this quantity would represent less than two percent of the total permitted capacity of the monofill facility landfill. The monofill facility has already permitted additional land for landfill use and will continue to add landfill capacity as needed. Drilling wastes would not significantly affect the available landfill capacity.

The following information is expected to be reported to the RWQCB quarterly: total volume of solids/liquids in each mud sump, volume of material disposed to waste facility, analysis of liquid samples, analysis of solid samples<sup>1</sup>. Liquids will be sampled for total dissolved solids, pH, specific conductance, heavy metals, and total petroleum hydrocarbons (TPH). Solids will be analyzed for heavy metals and TPHs.

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1. Based on the rescinded Monitoring and Reporting Program No. R7-2004-002 approved for the original SSU6 project, a new Monitoring and Reporting Program will be submitted following the same guidelines as the original.

### *Scrap Construction Materials*

Scrap wood, steel, glass, plastic, paper, calcium silicate insulation, and mineral wood insulation may be generated as general construction debris or from packing and insulation materials, and other construction and office-related activities. Approximately 20 to 40 cubic yards per week are anticipated to be generated during construction of the Project. Where practical, such as scrap steel and paper, these wastes will be recycled. Non-hazardous wastes that are not recycled will be disposed of at a Class III landfill in accordance with applicable Federal, State, and local regulations.

### *Sanitary Wastes*

During construction, sanitary waste will be collected in portable, self-contained toilets. The sanitary wastes from the portable chemical toilets will be pumped out regularly by a licensed contractor and transported to a sanitary wastewater treatment plant. During normal operations, the facility will be equipped with a septic system.

As indicated in the above sections, the non-hazardous solid wastes (other than drilling wastes) that cannot be recycled or reused would be disposed of at a Class III landfill, expected to be the Allied Imperial Landfill located in Salton City approximately 20 miles from the Project site (see Table 5.16-6). It is expected that the disposal of construction-related solid wastes from construction of the Amended Project would represent only a nominal (less than 0.01 percent) increases relative to current disposal volumes at the facility. This increase would not significantly affect available landfill capacity. Table 5.16-6 shows landfill locations, capacity, annual tonnage, and estimated closure dates.

**Table 5.16-4 Summary of Anticipated Construction Waste Streams and Management Methods**

Waste Stream	Anticipated Waste Stream Classification	Estimated Quantity	Estimated Frequency of Generation	Waste Management Method	
				Onsite	Offsite
Scrap Wood, Steel, Glass, Plastic, Paper, Calcium Silicate Insulation, Mineral Wood Insulation	Non-hazardous solids	25-40 cubic yards	Weekly	Containerize, housekeeping	Recycle when possible (steel and paper); Class III landfill for the balance
Empty Hazardous Material Containers - Drums	Universal waste	One cubic yard	Weekly	Store for less than 90 days	55-gallon drums – return to supplier or recondition; smaller containers – recycle (steel) or Class I or Class II landfill, as appropriate
Used Oil	Non-RCRA hazardous	< 55 gallons	Each flush period, approximately every 3 weeks	Store for less than 90 days	Recycle
Spent Cleaning Fluids	Non-RCRA hazardous	55 gallons	Monthly	Store for less than 90 days	Recycle via licensed contractor

## 5.16 Waste Management

Waste Stream	Anticipated Waste Stream Classification	Estimated Quantity	Estimated Frequency of Generation	Waste Management Method	
				Onsite	Offsite
Oil Absorbent Materials	Non-hazardous	Small Quantities	As needed	Store for less than one year	Class I or Class II landfill
Oily Rags	Non-hazardous	Three to four 55-gallon drums	Monthly	Store for less than one year	Laundry permitted for oily rags or Class I or Class II landfill
Contaminated Soil	Unknown	Unknown	As needed	Store for less than 90 days	Class I or Class III landfill, depending on the characteristics
Spent Lead Acid Batteries	Universal waste	Three batteries	Quarterly	Store for less than one year	Recycle
Spent Alkaline Batteries	Universal waste	72 batteries	Monthly	Store for less than one year	Recycle
Sanitary Waste	Sanitary	~500 gallons	Daily	Chemical toilets and holding tanks	Pumped by licensed contractor and transported to sanitary wastewater treatment plant
Drilling Wastes	Non-hazardous	790 CY/month 19,000 CY total	Monthly;  Total (24 months)	Mud sumps and/or brine ponds	Class II landfill

### 5.16.4.2 Operational Wastes and Management Methods

During operation of the Amended Project, the primary waste generated is expected to be non-hazardous solid waste. Small quantities of hazardous and universal wastes may also be generated during operations. A description of the waste generating activity, the waste, the anticipated waste quantity and a description of the waste management practices is provided in this section. The information is summarized in Table 5.16-5.

#### **Hazardous and Universal Wastes**

To minimize impacts to human health or the environment, the following general procedures will be used for the proper handling, labeling, packaging, storage, recordkeeping, and disposal of hazardous waste:

- The facility will apply to the EPA for a Hazardous Waste Generator Identification Number as a generator of hazardous waste.
- Hazardous wastes would be stored on site for less than 90 days in accordance with the requirements of Title 22, CCR.
- Hazardous wastes would be segregated for compatibility and stored in designated accumulation areas with appropriate secondary containment.



- Hazardous wastes would be picked up for transport only by licensed hazardous waste haulers. All hazardous wastes would be properly manifested to a permitted disposal facility.
- Hazardous waste documentation, including the biennial hazardous waste generator reports that would be submitted to the DTSC, will be kept on site and accessible for inspection for at least three years.
- Employees will be trained in hazardous waste management, spill prevention and response, and waste minimization.

Procedures will be developed to reduce the quantity of hazardous waste generated. Non-hazardous materials will be substituted for hazardous materials, and wastes will be recycled when possible.

#### *Used Oil*

Used oils will be accumulated and maintained on site in secure hazardous waste accumulation areas within secondary containment. Used oil will be recycled by a licensed oil recycler. It is anticipated that less than five gallons of used oil would be generated daily; however, during maintenance overhauls, it is possible that up to 10,000 gallons of used oil would be generated when a turbine sump is serviced. Waste quantities will be minimized by adherence to manufacturer recommendations for service.

#### *Oil Absorbents*

Oily rags and oil absorbent (used to cleanup small spills) may be generated as a normal part of equipment maintenance activities. Waste quantities will be minimized through regular preventative maintenance activities which will minimize leaks. The waste oil absorbents will be accumulated in 55-gallon drums and maintained on site in secure hazardous waste accumulation areas within secondary containment. This waste will be transported by a licensed transporter and shipped off site for energy recovery or disposal in a Class I landfill.

#### *Cleaning Solutions and Solvents*

Waste cleaning solutions, such as solvents and other chemical cleaning solutions may be generated during routine equipment maintenance and repair. These waste cleaning solutions will be collected and recycled on a regular basis by a licensed contractor (e.g., Safety-Kleen or equivalent).

#### *Empty Containers*

Empty containers may be generated during normal operations. Empty totes, such as those used to supply water treatment chemicals (nominal capacity of 300 to 400 gallons) will be returned to the chemical supplier. Typically, empty 55-gallon drums will be returned to the chemical supplier. If not, 55-gallon drums will be sent to a licensed drum recycler. If damaged, 55-gallon steel drums would be recycled as scrap metal. Empty containers that are less than 55-gallon capacity will be disposed of as industrial waste to a Class II or Class III landfill.

#### *Used Batteries*

Used lead-acid batteries will be recycled through a licensed battery recycler, or exchanged (and recycled) through the vendor when a replacement battery is installed in the equipment. At no time will more than 10 used lead-acid batteries be stored on site. Other spent batteries (e.g., alkaline flashlight batteries, lithium

ion cell phone batteries) will be accumulated on site in labeled containers and recycled at least annually per California universal waste management requirements.

### *Fluorescent Lamps*

Used fluorescent lamps will be stored in a labeled container on site to prevent damage, and recycled at least annually per California universal waste management requirements. The facility will replace lamps when they burn out, if necessary; however, the facility maintenance staff may elect to replace all lamps at the facility at a specified interval (e.g., every 10,000 operating hours), as it is more efficient for both the maintenance staff and the recycling facility.

### *Brine Solids*

Although the Amended Project is expected to generate substantially less solids than the original project, a small amount of solids are expected precipitate out of the brine in the brine ponds due to the low temperature (relative to reservoir temperatures) and the fact that some steam will flash off the produced brine, thus concentrating the dissolved salts. The rate of accumulation is not known, but is expected to be only a few tons per year. The brine solids will be removed on an annual basis. The brine solids will be removed, dewatered in a trailer-mounted pressure filter press, and transported by a licensed transporter to an appropriately-permitted offsite facility.

### *Piping Maintenance (descaling)*

Pipe maintenance and de-scaling activities that include hydroblasting or sandblasting will be performed in a designated containment area to prevent wastes generated from these activities from impacting the environment. Water from the hydroblasting process will be conveyed to the brine ponds for injection into the geothermal resource.

## **Non-Hazardous Wastes**

Non-hazardous wastes generated during the operations of the Amended Project would include empty containers (plastic, metal, glass, cardboard, and Styrofoam), scrap metals, insulation (silicate and mineral wool), waste office materials (e.g., paper) and drilling wastes. Anticipated waste streams and their estimated quantities are described below and summarized in Table 5.16-5.

Non-hazardous wastes will be transported by a licensed transporter and disposed or recycled at an appropriately-permitted facility. Copies of shipping papers, reports, waste analysis, and other related documents will be maintained on site.

### *Spent Brine*

The primary discharge from the Amended Project consists of spent brine that is injected directly into the brine injection wells. However, the spent brine is considered part of the geothermal production process, not a waste stream. Spent brine is exempt from regulations as hazardous waste according California Health and Safety Code Section 25143.1. The direct reinjection is subject to regulation by the Regional Water Quality Control Board. Management of the spent brine is discussed in more detail in Section 5.17, Water Resources.

### Scrap Materials

Scrap wood (e.g., pallets), steel, plastic, paper may be generated from operational and office-related activities. Approximately three cubic yards per week are anticipated to be generated during operation of the Project. Where practical, such as scrap steel and paper, these wastes will be recycled. Non-hazardous wastes that are not recycled will be disposed of at a Class III landfill in accordance with applicable Federal, State, and local regulations.

### Drilling Wastes

Periodically (once every five to 10 years), production or injection wells have to be re-drilled to maintain their productive capacity. Wet drilling wastes consist of soils, brine effluent and other materials removed from the ground during the re-drilling of production and injection wells. This waste would be allowed to dry out in RWQCB-permitted, clay-lined mud sumps. After evaporation, the remaining solid waste will be sent to Desert Valley Company's Monofill Facility, a Class II landfill. The monofill facility is owned by an affiliate of the Applicant. The monofill facility has already permitted additional land for landfill use and will continue to add landfill capacity as needed. Drilling wastes would not significantly affect the available landfill capacity and are considered a less-than-significant impact.

As indicated in the above sections, the non-hazardous solid wastes (other than drilling wastes) that cannot be recycled or reused would be disposed of at a Class III landfill, expected to be the Allied Imperial Landfill located in Salton City approximately 20 miles from the Project site (see Table 5.16- 6). The disposal of operational-related solid wastes from the Amended Project would represent only a nominal (less than 0.01 percent) increase relative to current annual disposal volumes at this Class III landfill. This increase would not significantly affect the available landfill capacity and is considered a less-than-significant impact. Table 5.16-6 shows landfill locations, capacity, annual tonnage, and estimated closure dates.

**Table 5.16-5 Summary of Operation Waste Streams and Management Methods**

Waste Stream	Anticipated Waste Stream Classification	Estimated Quantity	Estimated Frequency of Generation	Waste Management Method	
				On Site	Off site
Scrap Wood, Steel, Plastic, Paper	Non-hazardous solids	Three cubic yards	Weekly	Containerize, housekeeping	Recycle when possible (steel and paper); Class III landfill for the balance
Empty Hazardous Material Containers - Drums	Universal waste	One cubic yard	Weekly	Store for less than 90 days	55-gallon drums – return to supplier or recondition; smaller containers – recycle (steel) or Class I or Class II landfill, as appropriate
Used Oil	Non-RCRA hazardous	< 55 gallons; Up to 10,000 gallons	Monthly; Annually during steam turbine maintenance	Store for less than 90 days	Recycle

**Table 5.16-5 Summary of Operation Waste Streams and Management Methods**

Waste Stream	Anticipated Waste Stream Classification	Estimated Quantity	Estimated Frequency of Generation	Waste Management Method	
				On Site	Off site
Spent Cleaning Fluids	Non-RCRA hazardous	55 gallons	Monthly	Store for less than 90 days	Recycle via licensed contractor
Oil Absorbent Materials	Non-hazardous	Small Quantities	As needed	Store for less than 90 days	Class I or Class II landfill
Oily Rags	Non-hazardous	Three to four 55-gallon drums	Monthly	Store for less than 90 days	Laundry permitted for oily rags or Class I or Class II landfill
Spent Lead Acid Batteries	Universal waste	Three batteries	Quarterly	Store for less than one year	Recycle
Spent Alkaline Batteries	Universal waste	72 batteries	Monthly	Store for less than one year	Recycle
Fluorescent Lamps	Universal waste	24 lamps	Annually	Store for less than one year	Recycle
Brine Solids	Hazardous and/or non-hazardous	Varies based on number of plant trips	Annually	Brine ponds	Class I or Class II landfill as necessary, depending on test results
Pipe Scale Maintenance	Hazardous and/or non-hazardous	Varies	As needed	Brine ponds	Solids: Class I or Class II landfill as necessary, depending on test results; Liquids: Injection.
Drilling Wastes	Non-hazardous	500 cubic yards per well	Once per 5 years or as required to support operations	Mud pits and/or brine ponds	Class II landfill

#### 5.16.4.3 Waste Disposal Facilities

The applicant plans to use off site disposal facilities for hazardous, non-hazardous and universal waste streams. There will be no onsite disposal or treatment, with the exception of wastewater streams, as discussed in Section 5.17, Water Resources.

#### Hazardous Waste

Hazardous waste generated by the Amended Project during construction or operation would be stored on site for less than 90 days at specified accumulation points. A licensed hazardous waste transporter will haul

the waste to a Treatment, Storage or Disposal Facility (TSDF) or Class I landfill. There currently is no shortage of hazardous waste landfill capacity in California. The deposit rate has decreased by approximately 50 percent over the last several years because of source reduction by generators and the out-of-state transfer of California-only hazardous waste. The hazardous wastes that the Amended Project would generate annually would be a small fraction (well below one percent) of the capacity of the available hazardous waste landfill facilities. Therefore, waste disposal from the Amended Project would not have a significant adverse environmental impact.

The two waste disposal facilities that the Amended Project most likely would use are briefly described below, and are listed in Table 5.16.6.

*Clean Harbors, Buttonwillow Landfill in Buttonwillow, Kern County*

The Buttonwillow Landfill has a permitted capacity of 10.9 million cubic yards. Approximately one million cubic yards of capacity are currently available in the first cell, but several other permitted cells have yet to be built. With an annual usage of about 130,000 cubic yards, the landfill is expected to remain open until at least 2100, assuming that all permitted cells are constructed. Buttonwillow is permitted to accept hazardous wastes except for flammables, polychlorinated biphenyl wastes with concentrations exceeding 50 parts per million, medical wastes, explosives, and radioactive wastes with radioactivity greater than 20,000 picocuries.

*Chemical Waste Management, Kettleman Hills Landfill in Kettleman City, Kings County*

The Kettleman Hills landfill has a permitted capacity of 10.7 million cubic yards for Class I waste. Approximately 1,000,000 tons per year of hazardous wastes are disposed of each year at this facility. The landfill is expected to reach capacity by 2012, which would mean that, without expansion, it would be largely unavailable during Project operation.

**Non-hazardous Waste**

The disposal facilities that have been identified for the management of non-hazardous waste produced by the facility during construction and operation of the Amended Project are listed in Table 5.16-6. Currently, non-hazardous construction-related drilling waste may not be disposed of at any Imperial County-operated landfill without approval of the Colorado River RWQCB and the Imperial County Health Services Department. Drilling wastes may not be disposed of at the Allied Imperial Landfill under any circumstances. Drilling wastes would be disposed of at the Desert Valley Company's Monofill Facility.

**Recyclable Wastes**

There are a large number of disposal contractors available to assist the Applicant with management of recyclable materials such as used oil, spent lead-acid batteries, empty 55-gallon drums, fluorescent lamps, scrap paper, or oily rags that may be generated during construction or operations. The relatively small quantity of wastes anticipated from the Project is not expected to have a significant adverse impact to the waste management capacity of any of these contractors; therefore, individual contractors have not been identified for this AFC.

Table 5.16-6 Waste Management Facilities

Landfill/ TSDf Station	Location Phone Number	Class	Permitted Capacity	Annual Usage	Remaining Capacity	Estimated Closure Date	Approximate Distance from Site (miles)	Comments
Clean Harbors, Buttonwillow Landfill	2500 W. Lokern Rd. Buttonwillow, Kern County, 93206 661-762-6200	Class I	10,482 TPD, 14,293,760 CY	500,000 tons	Not available	1/1/2040	330	
Chemical Waste Management, Kettleman Hills Landfill	35251 Old Skyline Rd. Kettleman City, Kings County, CA 93239 559-386-9711	Class I	8,000 TPD, 10,700,000 CY	1 MM TPY	5.2 MM CY as of 2002	NA	375	
Clean Harbors, Westmorland Landfill	5295 South Garvey Rd. Westmorland, CA 92281 760-344-9400	Class I	NA	NA	NA	NA	20	
Niland Solid Waste Site	8050 Cuff Road Niland, CA 92257 760-482-4462	Class III	55 TPD, 131,000 CY total	NA	44,053 CY	4/1/2020	10	Construction/demolition, mixed municipal
Imperial Solid Waste Site	1705 West Worthington Road Imperial, CA 92251 760-482-4462	Class III	207 TPD, 1,936,000 CY	NA	183,871 CY	9/1/2015	40	Construction/demolition, mixed municipal
Calexico Solid Waste Site	New River & HWY 98, Calexico, CA 92231 760-482-4462	Class III	150 TPD, 2,064,598 CY	NA	1,530,950 CY	1/1/2022	50	Agricultural, construction/demolition, mixed municipal
Hot Spa Solid Waste Site	10466 Hot Spa Road, ¾ mi SE of Hot Spa, Bombay Beach, CA 92257 760-482-4462	Class III	10 TPD, 516,497 CY	NA	57,497 CY	4/1/2036	25	Construction/demolition, mixed municipal
Picacho Cut and Fill Site	Picacho Rd Btwn Winterhaven/Picacho Park Winterhaven, CA 92283 760-482-4462	Class III	15 TPD, 645,333 CY	NA	77,021 CY	NA	95	Construction/demolition, mixed municipal, tires

Table 5.16-6 Waste Management Facilities

Landfill/ TSD Facility	Location Phone Number	Class	Permitted Capacity	Annual Usage	Remaining Capacity	Estimated Closure Date	Approximate Distance from Site (miles)	Comments
Allied Imperial Landfill (Valley Environmental Services)	104 E Robinson Rd. Imperial, CA (760)355-0004	Class III	1,135 tons/ day peak	270,000 cubic yards	2,105,500 as of January 31, 2006	March 1, 2012	20	Will not accept drilling or filter cake wastes. Has purchased 160-acres of land for future expansion.
Monofill Facility (Desert Valley Co.)	3301 West Highway 86 Brawley, CA 92227 (760)348-4000	Class II	750 tons/day peak	510 tons/day	1,314,800 as of April 6, 2005	March 1, 2012	13	Dedicated to drilling and filter cake wastes from geothermal plants owned by the Applicant. Additional land has already been permitted to extend landfill use.

NA = Not available

CY = Cubic yards

TPD = Tons per day

TPY = Tons per year

MM = million

Source: Solid Waste Information System (SWIS), <http://www.ciwmb.ca.gov/SWIS/>. Referenced on October 14, 2008

#### 5.16.4.4 Cumulative Impacts

The Class III landfills that currently serve the Project area have an estimated closure date of 2019. The Class I landfills that serve the Project area have ample remaining disposal capacities. Project waste generation volumes of Class I and Class III waste for the Amended Project are expected to be substantially less than original Project. While other projects also would generate wastes that would consume some of the available disposal facility capacity, there appears to be sufficient capacity in disposal facilities regionally. The Amended Project's contribution to potential significant cumulative waste management impacts would be less than significant.

#### 5.16.5 Mitigation Measures

Waste management mitigation measures are embodied in the CEC's Conditions of Certification (COC) for the original project. These COCs have been adopted and modified by the Applicant to make them appropriate for the Amended Project in the following section.

#### 5.16.6 Conditions of Certification

Following are the existing COCs for the original SSU6 project. Applicant-recommended changes are indicated using *italics* for additional or revised text and ~~strike through~~ for deleted text. The only suggested change is to WASTE-3 where the Applicant recommends including the option for the general construction contractor to obtain the hazardous waste generator identification number as well as the Applicant.

**WASTE-1** The project owner shall provide the resume of a Registered Professional Engineer or Geologist, who shall be available for consultation during soil excavation and grading activities, to the Compliance Project Manager (CPM) for review and approval. The resume shall show experience in remedial investigation and feasibility studies. The Registered Professional Engineer or Geologist shall be given full authority by the project owner to oversee any earth moving activities that have the potential to disturb contaminated soil.

**Verification:** At least 30 days prior to the start of site mobilization, the project owner shall submit the resume to the CPM for approval.

**WASTE-2** If potentially contaminated soil is unearthed during excavation at either the proposed site or linear facilities as evidences by discoloration, odor, detection by handheld instruments, or other signs, the Registered Professional Engineer or Geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and file a written report to the project owner and CPM stating the recommended course of action.

Depending on the nature and extent of contamination, the Registered Professional Engineer or Geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If, in the opinion of the Registered Professional Engineer or Geologist, significant remediation may be required, the project owner shall contact (as appropriate) representatives of the Colorado RWQCB, the Imperial County Fire Prevention Department, and the California Department of Toxic Substances Control for guidance and possible oversight.



**Verification:** The project owner shall submit any final reports filed by the Registered Professional Engineer or Geologist to the CPM within 5 days of their receipt. The project owner shall notify the CPM within 24 hours of any orders issued to halt construction.

**WASTE-3** The project owner *or the general contractor responsible for Project construction* shall obtain a hazardous waste generator identification number from the Department of Toxic Substances Control prior to generating any hazardous waste.

**Verification:** The project owner shall keep its copy of the identification number on file at the project site and notify the CPM via the Monthly Compliance Report of its receipt.

**WASTE-4** Upon becoming aware of any impending waste management-related enforcement action by any local, state, or federal authority, the project owner shall notify the CPM of any such action taken or proposed to be taken against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts.

**Verification:** The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that would be required in the manner in which project-related wastes are managed.

**WASTE-5** The project owner shall prepare a Construction Waste Management Plan and an Operation Waste Management Plan for all wastes generated during construction and operation of the facility, respectively, and shall submit both plans to the CPM for review and approval. The plans shall contain, at a minimum, the following:

A description of all waste streams, including projections of frequency, amounts generated and hazard classifications; and

Methods of managing each waste, including treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/reduction plans.

**Verification:** No less than 30 days prior to the start of site mobilization, the project owner shall submit the Construction Waste Management Plan to the CPM. The Operation Waste Management Plan shall be submitted to the CPM no less than 30 days prior to the start of project operation. The project owner shall submit any required revisions within 20 days of notification by the CPM. In the Annual Compliance Reports, the project owner shall document the actual waste management methods used during the year compared to the planned management methods.

### 5.16.7 References

California Integrated Waste Management Board. Solid Waste Information System (SWIS). <http://www.ciwmb.ca.gov/SWIS/SearchList/List?COUNTY=Imperial&FAC=Disposal&OPSTATUS=Active&REGSTATUS=Permitted>, accessed November 2008.

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## 5.16 Waste Management

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